

REMARKS

Claims 1-10, 12-20, 22-47 and 49-57 are pending in the application. Claims 3-6, 10, 12-20, 22, 25, 26-34, 36-38, 42-46, and 55-56 are allowed. Claims 41, 47, 51 and 54 are objected to. Claims 1-2, 7-9, 23-24, 35, 39-40, 49-50, 52-53 and 57 are rejected. (The above listing is based on the body of the Office Action. The Summary is incorrect as Claims 26-32 and 34.) Claims 1, 8-10, 23, 35, 39-41, 47, 51, 53-54, and 57 have been amended. Claims 1-10, 12-20, 22-47 and 49-57 remain in the application.

No comment has been received in regard to the sketch of a proposed Figure 8 submitted with the amendment filed May 7, 2004. Approval is requested.

Claims 41, 47, 51, and 54 stand objected to as being dependent upon a rejected base claim, but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 41, 51 and 54 have been so rewritten. Claim 47 has been rewritten as an independent claim using language like currently amended Claim 41.

Claim 35 stands rejected under 35 U.S.C. 102(b) as being anticipated by (USPN 5,714,753 to Park) and under 35 U.S.C. 103(a) as being unpatentable over ("High Dynamic Range Imaging: Spatially Varying Pixel Exposures" by Shree K. Nayar and Tomoo Mitsunaga. Proceedings IEEE Conference on Computer Vision and Pattern Recognition, Vol. I, pp. 472-479) in view of (USPN 5,714,753 to Park).

Claim 35 has been rewritten to depend from allowed Claim 26 and is allowable on that basis.

Claims 1-2, 7-9, 23-24, 39, 49-50, 52-53, and 57 stand rejected under 35 U.S.C. 103(a) as being unpatentable over ("High Dynamic Range Imaging: Spatially Varying Pixel Exposures" by Shree K. Nayar and Tomoo Mitsunaga. Proceedings IEEE Conference on Computer Vision and Pattern Recognition, Vol. I, pp. 472-479) in view of (USPN 5,838,373 to Hasegawa et al.). Claim 40 stands rejected under 35 U.S.C. 103(a) as being unpatentable over ("High Dynamic Range Imaging: Spatially Varying Pixel Exposures" by Shree K. Nayar and Tomoo Mitsunaga. Proceedings IEEE Conference on Computer Vision and Pattern Recognition, Vol. I, pp. 472-479).

Claim 8 has been amended to depend from Claim 26 and is allowable on that basis.

Claim 53 has been amended to depend from Claim 25 and is allowable on that basis.

Claim 1 has been amended to state:

1. An image capture system for generating an extended effective dynamic range from a signal provided by an image sensor, said image capture system comprising:

an image sensing device having standard photosites with a predetermined response to a light exposure and non-standard photosites with a slower response to the same light exposure, said image sensing device having a color filter array of at least three different colors overlying said photosites, said standard and non-standard photosites each being associated with each of said colors;

an optical section exposing the image sensing device to image light, thereby causing the image sensing device to generate an image signal;

an additional section receiving said image signal;

a processing section expanding the response of the standard photosites to increased light exposures, said expanding utilizing signals from neighboring non-standard photosites of the same color; and

a controller having a normal mode and an expanding mode, said controller in said normal mode diverting said signal directly to said additional section, said controller in said expanding mode diverting said image signal through said processing section to said additional section.

The language of Claim 1 is supported by the application as filed, notably, the original claims and page 11, lines 10-30.

Claim 1 requires that the image sensing device has a color filter array. The rejection addressed color photosites in relation to Claim 9:

"In regards to claim 9 Examiner notes that it is extremely well known in the art to provide a color filter so as to produce a color image. Official notice is taken. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have added a color filter to Nayar's invention in order to generate a color image. Examiner further

notes that it is extremely well known to use a Bayer color filter so as to generate more data for the green color plane. Official notice is taken. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a Bayer color filter in order to generate more data for the green color plane. Examiner notes that in applying the Bayer color filter to Nayar's invention the standard photosite element e3 and the non-standard photosite element e1 would both be green."

Referring to the proposed combination of the Bayer color filter with Nayar's detector, if "the standard photosite element e3 and the non-standard photosite element e1 would both be green", then both blue and red would have non-standard photosites (e₂ and e₀). This does not meet the language of Claim 1, which requires that the standard and non-standard photosites are each associated with each of the colors of the array. The processing section utilizes signals from neighboring non-standard photosites of the same color in expanding the response of the standard photosites to increased light exposures.

Claims 2, 7, 39-40, 49-50, and 52 are allowable as depending from Claim 1.

Claim 23 has been amended to the language: "said image sensing device having a color filter array of at least three different colors overlying said photosites, said standard and non-standard photosites being associated with each of said colors" and is allowable on grounds discussed in relation to Claim 1.

Claim 24 is allowable as depending from Claim 23.

Claim 57 has been amended to add the same language as Claim 23 and is allowable on the same grounds. The language "wherein the photosites are color photosites and the neighboring non-standard photosites are of the same color as standard photosite being processed by the processing section" was removed from Claim 57.

Claim 9 is similar to the language removed from Claim 57. Claim 9 was amended to depend from Claim 57 and is allowable on that basis.

It is believed that these changes now make the claims clear and definite and, if there are any problems with these changes, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



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